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THE AMERICAN-CANADIAN NEWSPRINT PAPER INDUSTRY AND THE TARIFF

In 1911 for the first time newsprint paper was admitted free of duty from Canada. Since then it has remained on the free list. During this same period the United States has moved from self-sufficiency in its newsprint paper supply to dependence on Canada for more than one-third of the paper it uses for printing its newspapers. Hence it is of significance to consider what would be the effect of removing the duty on the present relations of Canada and the United States with respect to newsprint paper.

Provisions of the tariff law.—The United States act of July 26, 1911, providing for reciprocity with Canada upon the passage of similar legislation by Canada, put newsprint paper, imported into the United States from Canada, on the free list. This was accomplished by Section II, which was unconditional and independent of the reciprocity provision of the act, and which remained on the statute books of the United States. The benefit of this section of the act was extended two years later by court construction to Germany and certain other European nations under most-favored-nation treaties.¹ This extension to other countries besides Canada of the privileges of sending newsprint, as well as wood pulp and other cheap grades of paper, duty free into the United States, is of interest as one of the rare instances of the United States granting substantial concessions to other countries because of her most-favored-nation treaties. A little later, in 1913, newsprint was placed unconditionally on the free list by the tariff act of 1913, which is in force at the present time (June, 1922).

Growth of the Canadian industry.—Placing Canadian newsprint on the free list has been a factor in the great expansion of

¹ *Court of Customs Appeals*, IV (1913), 146.

the Canadian newsprint industry in the last decade, and consequently in the rapid increase of our newsprint imports, for it was almost equivalent to providing territory for extending the domestic industry. Our imports increased from $1\frac{1}{2}$ per cent of domestic production in 1909 to 65 per cent in 1921. Expansion of the American newsprint industry practically ceased after 1910, the increase in the domestic demand being taken care of thenceforth by the growing Canadian newsprint industry. The development of the latter from obscurity in 1910 to its present status of supplying in 1921 35 per cent of the newsprint used in the United States has been little short of phenomenal.

However, giving free entry to Canadian newsprint only hastened a little a process which was bound soon to begin in any case. American pulp-wood forests were being rapidly cut out. Tariff or no tariff, the point had been reached where it was profitable for American capital to build newsprint mills in Canada. Raising the tariff barrier which had operated against the exploitation of Canada's pulp-wood resources merely came at the psychological moment to hasten that process.

A detailed analysis of the relative costs of newsprint production in Canada and the United States from 1911 on will demonstrate the truth of this statement that the economic conditions were such as to lead inevitably to the expansion of the newsprint industry in Canada.

Comparative costs of production.—According to all comparative investigations that have been made, the average Canadian cost of production is lower than the average American cost. Table I, on page 683, shows the average cost of manufacture per ton of newsprint paper, not including depreciation allowance, for the United States and Canadian mills in 1910, as determined by the United States Tariff Board,¹ and for the years from 1913 to the middle of 1916, as determined by the Federal Trade Commission.²

¹ *Report on the Pulp and Newsprint Paper Industry*, United States Tariff Board, 1911.

² *Newsprint Paper Industry*, Federal Trade Commission, 1917.

In dealing with figures for average cost of production it must, of course, be borne in mind that the manufacturers are actually producing at widely varying costs. Thus in the United States the costs of thirty-five of the principal newsprint mills varied from \$25.77 to \$44.41 per ton for different mills in 1915 and from \$24.93 to \$46.94 per ton (including depreciation) in the first half of 1916. Nevertheless, average figures more or less satisfactorily represent the general trend of cost conditions.

It will be noted that from 1910 to the middle of 1916 there was a slow but unbroken decrease in the cost of production in the United States, and that the Canadian cost, although slightly higher in 1913 than in 1910, declined steadily from 1913 to 1916.

TABLE I
AVERAGE COST OF MANUFACTURE

	1910		1913		1914		1915		1916*	
	United States	Canada	United States	Canada	United States	Canada	United States	Canada	United States	Canada
Groundwood.....	\$13.27	\$ 8.49	\$12.07	\$ 8.54	\$12.03	\$ 9.06	\$11.63	\$ 8.65	\$11.33	\$ 8.47
Sulphite.....	8.63	7.41	8.02	7.97	7.64	7.68	7.47	7.01	7.33	6.74
Other materials.....	.84	.99	1.26	1.17	1.26	1.15	1.39	1.27	1.09	1.13
Total materials.....	\$22.74	\$16.89	\$21.35	\$17.68	\$20.93	\$17.89	\$20.49	\$16.93	\$19.75	\$16.34
Labor.....	3.27	3.10	3.49	2.75	3.51	2.60	3.41	2.54	3.34	2.36
Other costs.....	6.87	7.45	6.89	8.20	6.98	7.67	6.62	6.91	7.24	7.01
†Total costs.....	\$32.88	\$27.53	\$31.73	\$28.63	\$31.42	\$28.16	\$30.52	\$26.38	\$30.23	\$25.71

* Six months only.

† Not including depreciation.

In April, 1918, it was estimated that the average cost of producing newsprint in all important mills in the United States and Canada combined had risen to \$56 per ton. In the latter part of 1919, however, according to the Canadian government auditor, production costs in the more efficient mills of Canada was only about \$50 per ton.

The estimate of the present cost differential in favor of Canadian newsprint mills as about 10 per cent is generally accepted. The last detailed comparison is the one presented in the foregoing table. In each of the years in question the Canadian cost was considerably lower than the American cost,

ranging from \$25.71 to \$28.63 per ton, in comparison with a range of \$30.23 to \$32.88 for the United States.

The items mainly responsible for this differential were groundwood and sulphite, although Canadian labor also was less expensive than American labor. The proportions of total Canadian to total American costs in the period covered and also the relative proportions of costs of raw material were as follows:

TABLE II
RATIO OF CANADIAN TO AMERICAN COST

Year	Total	Materials Only
1910.....	83.7	74.3
1913.....	90.2	82.8
1914.....	89.6	85.5
1915.....	86.4	82.6
1916.....	85.0	82.7

Canadian costs of material varied between 15 and 26 per cent lower than American costs of material, while the total cost of production ranged from 10 to 16 per cent lower in Canada than in the United States.

An idea of the relative importance of particular items entering into the cost of newsprint paper can be gained from Table III, on page 685, which shows the average ratio of the cost of each item to the total cost in American and Canadian mills combined in the first half of 1916:

Raw materials constituted over three-fifths of total expense, while the labor item of conversion of pulp into paper was only 10 per cent.

Plainly the country which has relatively cheap supplies of wood pulp has a great advantage, for the cost of groundwood and sulphite combined constitutes 58 per cent of the total cost of production, including a depreciation allowance.

Canada's advantage, then, lies principally in her lower cost of wood pulp. In the main, her newsprint mills use wood pulp made at a low cost by themselves, while American mills either manufacture their pulp at a higher cost than that of the Canadian

mills or purchase it at what is ordinarily a higher cost than that for which they could make it themselves.

Canada's lower wood-pulp production cost is, in turn, due almost exclusively to the lower cost of her pulp wood. There are several reasons for this: Canada has the advantage of greater accessibility to her pulp wood, with consequently a smaller expense for transportation. Spruce and other pulp woods

TABLE III

Stock	Per cent
Sulphite.....	23.36
Groundwood.....	34.30
Miscellaneous.....	3.60
Total.....	61.26
Conversion	
Labor.....	9.99
Felts.....	2.51
Wires.....	1.36
Repairs.....	3.54
Fuel.....	7.28
Power and water rentals.....	1.08
Miscellaneous.....	4.12
Total.....	29.88
General expense	
Taxes and insurance.....	1.33
General and administrative.....	1.96
Total.....	3.29
Depreciation.....	5.57
Total cost.....	100.00

grow most plentifully in the regions where the logs can be readily floated to the mills on the numerous south-flowing streams of the provinces. This is a much less expensive method than rail transportation, which is necessarily used by most of the larger mills in the United States. Again, Canada has the immense advantage of being able to use pulp wood from the extensive stands of timber on Crown lands, the export of which to the United States and elsewhere is forbidden.

The Canadian provincial governments have encouraged development of pulp-wood areas by leasing Crown lands and water-powers at nominal rates, by establishing fire-protective systems, by building reservoirs at headwaters, and by certain beneficial regulations relative to tree cutting.

The saving in Canadian pulp-wood production cost is a result of saving in each of the three components into which the production cost of any commodity resolves itself—labor cost, return to capital, and the cost of the raw material in the ground, or wherever it originates. In the first place, the mere increase in Canadian wages to the United States level, which is generally admitted to have occurred, and an assumption of about the same average capacity on the part of the laborers of the two countries to work and to work efficiently, do not necessarily, and do not in this case, mean the same labor cost per ton. For Canadian mills, due to greater accessibility of Canadian pulp wood and the easier means of transportation available as compared with the United States, are able to dispense with a considerable share of the labor necessary for getting pulp wood to American pulp mills. It is just a case of using less labor per ton of output, not a case of using the same amount and paying each unit less.

Thus the labor cost of getting out the pulp wood in Canada remains smaller than in the United States, in spite of the fact that wages in the two countries may now be regarded as approximately equal and independent of the question of relative labor efficiency, which is a controversial one.

The other factors causing Canada's cost of pulp wood to be lower are the differentials in the other two components of production cost above mentioned. One is closely linked with the saving in labor cost—it is the saving on return to capital (tools, machinery, railroads, etc.) due to the fact that fewer services of capital are required in Canada to get the pulp wood to the pulp mill. The third, and probably the most important of them all, is the low cost at which most of the Canadian newsprint companies acquired large tracts of pulp-wood timber in Canada and the low cost at which they are able to hold it for future use, in contrast with the situation of certain important American

companies who are forced through their own inadequate holdings of pulp-wood stands and by the Canadian provincial pulp-wood export embargoes to shop at a handsome price for pulp wood from the reduced woodlands of the United States or from the fee lands of Canada.

It will be noted that in the main these three components of saving in pulp-wood production cost in Canada as compared with the United States have their basis in the advantages to the Canadian mills of accessibility to the pulp-wood areas and of freedom to use their large holdings of Crown-land timber, bought cheap, as well as in the advantages conferred through governmental interest in the development of the Canadian pulp-and-paper industry.

Another factor, in addition to the smaller cost of raw materials, apparently is in favor of Canada. In 1911 the United States Tariff Board found that on the average the efficiency of equipment was slightly greater in Canada than in the United States. In the last decade this efficiency differential has undoubtedly increased, for during that time Canada has multiplied her output many times through building new mills and installing up-to-date machinery, while very little extension of plant has taken place in the United States.

Table IV¹ compares the newsprint machines in Canada with those in the United States as they were about two years ago. The machines are divided in five classes according to their width. Machines up to 100 inches wide may be called small; 101 to 140 inches, medium-small; 141 to 170 inches, medium-large; 171 to 200 inches, large; and over 200, extra-large. The larger machines of both countries are employed almost exclusively on newsprint, while the smaller ones in a great many cases are often employed part of the time on other kinds of paper, such as book, sulphite bond, or wrapping paper. The wide machines operate usually at a very rapid speed. They are hence unsuited for making other types of paper like the above, of whose texture and strength more is demanded than that they shall have the minimum strength necessary to prevent the paper from breaking in the

¹ Compiled from Lockwood's *Directory of the Paper and Allied Trades*.

paper machine or the printing presses. This minimum strength is all that newsprint requires.

Since the data comprised in Table IV were compiled a number of large new machines have been installed in Canada and the United States. The table, nevertheless, affords a fairly accurate comparison of the sizes of Canadian and American paper machines.

It will be seen that Canada's machines, though naturally fewer in number than those of the United States, are on the average much larger. In the United States 72.4 per cent of the newsprint machines were in the small and medium-small classes (up to 140 inches in width) compared with 40.4 per cent

TABLE IV

INCHES OF WIDTH	UNITED STATES		CANADA	
	Number	Per cent	Number	Per cent
Up to 100.....	44	32.8	12	19.4
101 to 140.....	53	39.6	13	21.0
141 to 170.....	35	26.1	25	40.4
171 to 200.....	2	1.5	6	9.6
Above 200.....			6	9.6
Total.....	134	100.0	62	100.0

in the same classes in Canada. Canadian pre-eminence in the three larger classes is apparent. Of the machines in Canada, 9.6 per cent were of the extra-large variety (over 200 inches).

The two factors discussed—the lower cost of pulp wood to Canadian mills and the superior efficiency of Canadian paper-mill equipment—are apparently the only important differentials in Canada's favor at the present time, for wages are now about the same in the two countries. However, at the time the cost figures given above were compiled the factor of comparative labor cost was of some importance in causing Canada's paper production cost to be lower.

This factor has considerably greater effect on the total paper cost differential of the two countries than would be indicated merely by the fact that labor accounts for only 10 per

cent of the cost of converting pulp into paper. The percentage of cost of production of any commodity attributable to cost of labor increases the farther back one traces the processes of production. Compounding the amounts paid in wages during the various processes of conversion from the wood in the ground to the finished paper results, of course, in a figure for the proportion of total labor cost to total cost of production much larger than the proportion of labor in the single process of conversion of pulp into paper.

The tendency toward equalization of the wage scales of the two countries has probably been the principal factor in bringing Canada's advantage in 1916 of 15 per cent lower cost of newsprint production to what is now estimated as 10 per cent. The fact

TABLE V

	International Paper Co.	Canadian Export Co.		International Paper Co.	Canadian Export Co.
	Cents per Pound	Cents per Pound		Cents per Pound	Cents per Pound
1920			1921— <i>Cont.</i>		
First quarter	4.50	4.50	Second quarter	5.50	5.50
Second quarter	5.00	4.50	Third quarter	4.75	4.75
Third quarter	5.75	5.50	Fourth quarter	4.00	4.00
Fourth quarter	6.50	6.50	1922		
1921			First quarter	3.50	3.50
First quarter	6.50	6.50	Second quarter	3.50	3.50

that the Canadian and the American wage scales have been approximately the same, however, has no effect on the fact that less labor is required per cord in Canada than in the United States to get out the pulp wood from the forests and to the mills. The latter factor remains in Canada's favor.

Prices.—In spite of Canada's advantage in cost of production, American and Canadian newsprint prices in the American market are about the same. Table V, which gives comparative prices charged on their 1920, 1921, and 1922 contracts by the International Paper Co. and the Canadian Export Co., the principal purveyors of newsprint in the United States and Canada, respectively, shows how closely the American and Canadian prices hang together. The International Paper Co. usually takes the lead in price-making and the other companies, including

the Canadian Export Co., model their prices on the schedule announced by the International Paper Co. It will be noticed that during 1920 the prices of the latter tended to be slightly in the lead of those of the Canadian Export Co., but that they reached their peak at the same time and declined together.

The general tendency toward uniformity of American and Canadian newsprint prices is brought out also in the price figures for total contract sales in the American market by American mills compared with total contract sales in the same market by Canadian mills, as shown below:

TABLE VI
NEWSPRINT PAPER

(Data from monthly reports of Federal Trade Commission)

Month	United States Contract	Canadian Contract	Month	United States Contract	Canadian Contract*
	Cents per Pound	Cents per Pound		Cents per Pound	Cents per Pound
1919			1920—Cont.		
May.....	3.69	3.598	September.....	5.531	5.308
June.....	3.65	3.58	October.....	5.790	5.343
July.....	3.646	3.574	November.....	5.792	5.541
August.....	3.652	3.624	December.....	5.569	5.770
September.....	3.675	3.667	1921		
October.....	3.725	3.666	January.....	6.076	6.385
November.....	3.782	3.757	February.....	5.921	6.458
December.....	3.825	3.744	March.....	5.862	6.480
1920			April.....	5.409	5.507
January.....	4.362	4.267	May.....	5.248	5.497
February.....	4.533	4.569	June.....	5.227	5.322
March.....	4.577	4.556	July.....	4.770	4.824
April.....	4.726	4.817	August.....	4.762	4.758
May.....	4.673	4.457	September.....	4.586	4.388
June.....	4.752	4.550	October.....	4.188	4.069
July.....	5.211	4.938	November.....	4.194	4.002
August.....	5.371	5.306	December.....	4.102	4.018

* Prices paid by United States publishers.

Whatever the relative position of the two countries as regards production costs, it would hardly be expected that the prices in the two regions would differ materially when we consider that they cater principally to the same market. The conclusion to be drawn from the fact that it costs less to produce newsprint in Canada than in the United States but that approximately the same price is received for the product of each country, is

naturally that the Canadian industry makes greater profits than the American industry.

Canadian restrictions on pulp-wood exports.—Canada naturally wants to preserve the advantage accruing to her by reason of her superior pulp-wood stands. Another aim of hers is to preserve her forests. Moreover, she wants to develop her pulp-and-paper industry. Consequently the principal pulp-wood provinces for a number of years have forbidden exports of pulp wood from lands owned by the Crown, which constitute much the greater portion of total Canadian pulp-wood lands. These restrictions are fairly successful in their aim. They prevent Americans from obtaining cheap pulp wood from lands on which in some cases they have had leases from the Canadian government since before the restrictions went into effect. They protect the Canadian forests from too rapid depletion. They force American capital to manufacture pulp and paper in Canada. Of course, as far as the provinces succeed in building up a pulp-and-paper industry at home, they create a demand for pulp wood which makes their aim of forest conservation by just so much less effective. By and large, however, the restrictions seem to operate as a truly conservationist measure, aside from their industrial aspect.

The restrictive legislation, in outline, is as follows.¹ Exploitation of forest lands in the Canadian provinces is undertaken by individuals under several forms of tenure. Some lands are held in fee simple; in the case of timber or pulp wood cut from such lands no restrictions are placed upon the owner. He may sell the logs in Canada, the United States, or elsewhere as he sees fit. Other lands are retained by the provinces as Crown lands; on payment of ground rent and stumpage fees, private operators may secure a license to cut from such lands. Wood cut on Crown lands must be manufactured in Canada, export of it in unmanufactured form being unconditionally prohibited. This type of legislation was initiated by an order-in-council of the

¹ It should be clearly understood that the Dominion government in no way restricts or has ever restricted the exportation of pulp wood; the embargoes are an exclusively provincial affair.

province of Ontario in 1900. It applied first only to pine timber, then being exported in large quantities because of the depletion of the pine forests in the Lake states, but in 1902 it was extended to pulp wood. Similar orders-in-council were applied to pulp wood by Quebec in 1910 and by New Brunswick in 1911. British Columbia prohibits the exportation of logs or pulp wood or shingle bolts cut from Crown lands and, in the case of some Crown-granted lands, charges a manufacturing tax which is rebated if the logs are manufactured in Canada. There are no Crown timberlands in the province of Nova Scotia, and consequently no laws affecting the use of timber cut thereon.¹

The restrictions named above have not gone unnoticed in the United States. Some large American interests which held leases on Crown-land pulp wood limits in Canada, and which depended to some extent on them for their pulp-wood supply, were rather suddenly forced by the passing of the orders-in-council to discontinue sending pulp wood from their Canadian limits to their mills in the United States. Consequently they were placed at a disadvantage compared with American mills which owned ample pulp-wood stands in the United States or leased lands in fee simple in Canada. In the last two or three years they have exerted pressure to secure the lifting of the embargoes. This pressure has had concrete result in two forms of federal legislation in the United States.

First, the Underwood Resolution, a joint Congressional resolution which failed to receive the assent of President Wilson but which was later signed by President Harding, provides for a commission of five men to present to the Dominion government or to the provincial governments of Quebec, Ontario, and New Brunswick, the claims of Americans holding leases on Crown lands, acquired prior to the restrictive orders-in-council, and to negotiate for the cancellation of such orders in so far as they apply to Americans. If the commission fails to secure this end by negotiations, it is to "investigate, consider, and report to Congress, what action should be taken to secure the cancellation of the orders so that they should not continue to

¹ *Canadian Pulp and Paper Association Bulletin No. 29.*

militate against the interests of the people of the United States affected by them." However, no action has yet been taken by the President to appoint this commission. It has been often stated openly in Canada that the pulp-wood embargoes are absolutely necessary for the economic welfare of the provinces concerned, and that the mere fact that certain American interests are adversely affected by these restrictions is insufficient ground for altering them. Feeling at times has run high in Canada on account of rumors that the United States intended to adopt a big-stick policy toward Canada. Unfortunately, some ground had been given for this fear by open threats of retaliation made at one time in certain quarters in the United States. The threatened retaliation was to take the form of embargoes on shipments to Canada of coal and sulphur, two necessary materials in pulp manufacture for which Canada is largely dependent on the United States. Hence in many instances Canadians feared that the Underwood commission would come prepared to threaten retaliation of this sort in case the provinces concerned refused to modify their embargoes. Even in quarters where these rather irresponsible threats of retaliation were discounted, it was stated in a very firm manner that nothing could induce the provinces to make their export restrictions any less rigid. The attitude of the Canadians remains uncompromising and the matter is at present in abeyance.

The desire for retaliation has expressed itself in another form of federal legislation on the part of the United States, namely, placing a duty on imports from Canada into the United States of the finished product into which Canada makes its pulp wood. The present tariff bill, passed by the House of Representatives and now before the Senate, provides for a 10 per cent retaliatory duty on newsprint from any country or part of a country restricting export of pulp wood to the United States.¹ This retaliatory duty, however, is to take effect only in case the president chooses to have it do so. When one considers the vast political power wielded by the press of the country, which imports from Canada more than a third of the paper it uses, it

¹ H. R. 7456, Title II, Section 201, Par. 1659.

seems at any rate somewhat doubtful whether this retaliatory duty will ever be invoked, assuming that the Senate retains the provision in unchanged form.

Relation of the Canadian to the American industry.—In order best to understand newsprint tariff issues between Canada and the United States, one should think of the American and Canadian newsprint paper industries as essentially one and the same entity, having the same principal markets and the same interests, modified only by protective tariff duties and export embargoes on the finished product or on essential raw materials. Geographically they form in the main one group of mills, being much more closely connected with each other than different portions of some other industries lying entirely inside the United States. To a certain extent they use raw material from the same source. A large part of the Canadian and the American newsprint mills are members of one association. Upward of 75 per cent of the capital invested in the Canadian newsprint paper industry is of American origin. The greater part of the newsprint trade between Canada and the United States is hence between Americans north of the border line and Americans south of the border line. More than 35 per cent of Canadian production is used by newspapers in the United States. As a result of these conditions we may regard Canada's development almost in the light of a northward extension of the domestic industry, taking place largely for the purpose of supplying American newspapers with newsprint. Yet the fact that Canada is a separate political unit has played a considerable part in accelerating the northward movement of the industry, through the Canadian provincial pulp-wood embargoes described above, which make Canadian Crown-land pulp wood unavailable to mills in the United States. Except for this stimulus to northward movement resulting from the Canadian prohibition of pulp-wood exports from Crown lands, the present condition is much similar to competition between two sections of the same industry, such as might exist between two geographical sections entirely within the United States, one of which has an average lower production cost than the other.

Nevertheless, even though our relation to the Canadian newsprint industry is not one that lends itself easily to adjustment through the tariff, it is fraught with great significance as regards the future of the industry. The Canadian industry is bound to become increasingly important, for the American industry is becoming more and more remote geographically from the main sources of pulp-wood supply, and Canada is determined to make the most out of her possession of large pulp-wood forests, keeping them as far as possible for her own industry to the exclusion of the American industry. American newsprint companies must manufacture increasingly in Canada, or at the least establish their pulp mills there, even if access to Canadian Crown-land timber is made freer.

The fact is, that except for certain companies in the United States which have adequate pulp-wood holdings in Maine and certain companies near the Canadian border which foresightedly provided themselves early with large tracts of freehold pulp-wood lands in Canada and because of their comparative nearness to these supplies can transport their pulp wood reasonably cheaply, the American newsprint industry, as far as it is confined to the northeastern portion of the United States, has seen the end of expansion for many years to come. Canada will almost inevitably soon produce more newsprint than the United States. In time Alaska and perhaps the Western part of the United States will develop newsprint production on an important scale. But they always will be handicapped by the fact that they are farther distant than eastern Canada from the main consuming markets.

Relation of transportation to the industry.—The factor of transportation together with the economies of integration of both the process of pulp-making and the process of paper-making are the ultimate factors determining the order of development of the pulp-wood areas of the world and the dates of moving on to new areas. Factors like sudden changes in tariff—for example, putting Canadian newsprint imported into the United States on the free list in 1911, and excluding the main pulp-wood supplies of one country from its more highly industrialized

neighbor—though exerting much influence on geographical shifts in the industry, are of minor importance in the long run.

The high cost of transportation of logs always causes the wood-pulp industry to be located near the pulp-wood forests; naturally the forests nearest the newsprint consuming centers are chosen. The newsprint mills themselves are then located close to the wood-pulp mills because of economies achieved thereby in the process of manufacture, and because it costs less to transport the finished newsprint than it does to transport the pulp. As the forests recede from the mills the tendency is for the wood-pulp mills to follow them. Artificial national influences such as tariff measures and pulp-wood embargoes tend to accelerate this movement, as they did beginning about 1910 in the case of the movement of American capital into Canada. As the pulp mills move toward the receding forests, the newsprint mills, though much more slowly, follow in their turn. They tend to stay near the pulp mill and yet the economy gained thereby is so much less proportionately than that gained through the pulp mill being near the pulp wood that the tendency is much less clearly defined.

Of course the foregoing tendencies toward migration of the industry are never carried to the full because of the fact that the pulp wood in any section is seldom completely cut out, and tends to grow in again, or is replanted. The demand for newsprint and other papers made of sulphite pulp and groundwood ordinarily is strong enough to insure such a return to pulp mills which get their pulp wood from the partly exhausted areas near them or else bring it at a heavy expense from a distance or to insure such a return to paper mills which bring their pulp from distant pulp mills, that it is not worth their while to tear up their costly immobile plants and move nearer the virgin forests.

Consequently we may expect the present newsprint and pulp mills in the United States to remain, but not to increase substantially in number nor to instal much new modern machinery. It is highly likely that agitation for reforestation and the present realization of our great need for pulp wood supplies will result

ultimately in some such crop system of pulp wood planting as is practiced in certain European countries. But even then a material advantage will remain with Canada. How vigorously later developed regions, such as Alaska, having the advantage of virgin pulp wood stands and the disadvantage of a long haul for the finished product, will be able to compete with regions near the eastern cities having the advantage of a short haul for the finished product and the disadvantage of a high price for pulp wood, is now dependent on too many uncertain factors to permit of prognostication. But as long as Canada has large virgin stands, and until, if ever, her forests reach the present state of exhaustion of the American forests, the newsprint industry of the United States must grant first place to that of Canada.

CONSTANT SOUTHWORTH

WASHINGTON, D.C.